REMARKS

Claims 1–32 are pending in this application, with claims 11–16, 24, 25 and 32 withdrawn from consideration. By this Amendment, claims 1, 4, 9, 17–20, 26, 28 and 29 and withdrawn claims 10, 23 and 31 are amended. The amendments to the claims are supported in the original claims and merely correct issues under 35 U.S.C. §112. No new matter is added. Applicants respectfully request reconsideration and prompt allowance in view of at least the following remarks.

Applicants appreciate the courtesies shown to Applicants' representatives by Examiner Kemmerle in the November 20, 2008 personal interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks.

The Office Action objects to the specification but does not point to specific portions of the specification as grounds for the objection. Instead, the Office Action recites that the specification appears to be a direct translation from a foreign language. Applicants assert that the specification is in proper idiomatic English and respectfully request withdrawal of the objection.

The Office Action rejects claims 1–9, 17–22 and 26–30 under 35 U.S.C. §112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Each specific rejection is addressed below.

As discussed during the November 20 personal interview, the above amendments to the claims and attached dictionary definitions overcome the §112 rejection for the reasons discussed below.

Claims 1, 17 and 26 are amended to clarify the recited positions of the variously recited gripping portion. Applicants assert that the amendments clarify the recited features and respectfully request withdrawal of the rejection to claims 1, 17 and 26.

Claim 3 is rejected for referring to the heat distortion temperature of the resin. Applicants submit the attached Appendix, which includes a discussion of the heat distortion temperature and a dictionary definition of "heat distortion point," which is synonymous with "heat distortion temperature," as evidence that the term "heat distortion temperature" was not indefinite to a skilled artisan at the time of the filing of the application and that claim 3 is therefore not indefinite. Applicants respectfully request withdrawal of the rejection to claim 3.

Claims 4, 18 and 26 are rejected for reciting "the other part." The claims are amended to recite "a part" and "another part" and have proper antecedent basis. Withdrawal of the rejection of claims 4, 18 and 26 is respectfully requested.

Claims 20, 28 and 29 are amended by removing the recitation "under the control in accordance with a predetermined program." Withdrawal of the rejection to claims 20, 28 and 29 is respectfully requested.

As the amendments to the claims and attached evidence overcome all of the grounds of the §112 rejection, withdrawal of the rejection is respectfully requested with respect to the remaining dependent claims.

The Office Action rejects claims 5, 7 and 26–30 under only §112. As noted by Examiner Kemmerle during the interview, the claims would be allowable if the amendments to the claims do not alter their scope. As the amendments to claims 5, 7 and 26–30 do not substantively alter the scope of the claims, and because no art is applied against the claims under §102 or §103, in view of the Examiner's indications during the interview, Applicants assert that the claims are patentable.

The Office Action rejects claims 1–4 and presumably 6 and 9 under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 4,982,486 (Otagawa). Applicants respectfully traverse the rejection.

As discussed during the interview, Otagawa fails to teach "supplying continuously the resin molding to a molding gripping portion of a bender disposed on the downstream side of an exhaust port of the sizing equipment along the constant extrusion direction, the gripping portion slidably gripping the resin molding; and performing an axial bending process for the resin molding," as recited in claim 1. Rather, Otagawa discloses that "[b]oth door moldings and sash moldings are then cut into a predetermined length. In the case of the front sash molding, it is further bent" (Otagawa at col. 3, lines 61–63). Because Otagawa discloses that the moldings are cut into a predetermined length before they are bent, Otagawa fails to disclose "supplying continuously the resin molding to a molding gripping portion . . . and performing an axial bending process," as recited in claim 1.

Further, Otagawa merely discloses that the "sash molding . . . is further bent, as shown in Fig. 2, by passing it through a bender" (Otagawa at col. 3,lines 63–64). Fig. 2 shows the already bent sash molding. Importantly, although Otagawa discloses molding that is bent, it fails to specifically teach the recited steps in the claims concerning bending the resin molding, specifically the steps recited in claim 1.

Therefore, Otagawa fails to teach every feature of claim 1. Accordingly, claim 1 is patentable over Otagawa. As claim 1 is patentable over Otagawa, dependent claims 2–4, 6 and 9 are also patentable, based on the patentability of claim 1, as well as for the additional features the claims recite. Accordingly, Applicants respectfully request withdrawal of the above rejection.

The Office Action rejects claims 8 and 17–22 under 35 U.S.C. §103(a) over Otagawa. Applicants respectfully traverse the rejection.

The rejection of claim 8 relies on the presumption that Otagawa teaches or suggests all of the features of claim 1, from which claim 8 depends. As Otagawa fails to teach or suggest all of the features of claim 1, the rejection of claim 8 is improper.

Otagawa fails to teach or suggest "supplying continuously the first member to a first member gripping portion of a bender . . . [and] performing an axial bending process for the first member, when the first member passes through the first member gripping portion," as recited in claim 17. Similar to the argument with respect to claim 1 above, Otagawa discloses that "[b]oth door moldings and sash moldings are then cut into a predetermined length. In the case of the front sash molding, it is further bent" (Otagawa at col. 3, lines 61–63). Thus, as discussed above, Otagawa discloses that the moldings are cut into a predetermined length before they are bent. Because the moldings are cut into predetermined lengths before they are bent, the moldings are not supplied continuously to a bending portion and, necessarily, Otagawa fails to teach or suggest "supplying continuously the first member to a first member gripping portion of a bender disposed," as recited in claim 17.

Further, similar to claim 1, Otagawa merely discloses that the "sash molding . . . is further bent, as shown in Fig. 2, by passing it through a bender" (Otagawa at col. 3,lines 63–64), and thus fails to specifically teach or suggest the recited steps in the claims concerning bending the resin molding, specifically the steps recited in claim 17. Accordingly, claim 17 is patentable over Otagawa.

Additionally, dependent claims 18–22 are also patentable, based on the failure of the presumption that Otagawa teaches or suggests all of the features of claim 17, from which the dependent claims variously depend. Accordingly, Applicants respectfully request withdrawal of the above rejection.

Claims 10, 23 and 31 are amended to depend from independent claims 1, 17 and 26, respectively. As claims 10, 23 and 31 depend from and otherwise require all of the limitations of an allowable claim, based on the above discussion, Applicants respectfully request rejoinder on non-elected claims 10, 23 and 31.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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Registration No. 27,075

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Registration No. 44,325

JAO:SMS/jnm

Attachment:
Appendix
Petition for Extension of Time

Date: November 26, 2008

OLIFF & BERRIDGE, PLC
P.O. Box 320850
Alexandria, Virginia 22320-4850
Telephone: (703) 836-6400

DEPOSIT ACCOUNT USE AUTHORIZATION
Please grant any extension necessary for entry;
Charge any fee due to our Deposit Account No. 15-0461

APPENDIX

INJECTION MOLDING HANDBOOK

THE COMPLETE MOLDING OPERATION

TECHNOLOGY, PERFORMANCE, ECONOMICS

SECOND EDITION

DONALD V. ROSATO, PH. D.
MARKETING MANAGER, PLASTIC FALLO

DOMINICK V. ROSATO, P.E.
PROFESSOR, RHODE ISLAND SCHOOL OF DESIGN

KLUWER ACADEMIC PUBLISHERS
BOSTON/DORDRECHT/LONDON

lower elastic modulus, which causes more stable extrusion and faster relaxation of any surface roughness that might develop.

Thermal Properties

The thermal properties of plastics that can readily be examined by different test procedures are: (1) useful temperature range, (2) transition temperatures (glass transition T_g and melt temperature T_m), (3) thermal conductivity, (4) heat capacity, (5) coefficient of linear thermal expansion, and (6) temperature dependence of mechanical properties. These important properties are defined in the following paragraphs.

Useful Temperature Range

The upper temperature limit at which a polymeric material can be used for a prolonged period of time depends on the polymer's structure and internal forces holding together the chains. When the temperature increases, these forces become weaker in comparison to the thermal energy of the molecules, allowing relatively large structural deformations. Temperatures above which large deformations start to form are usually not recommended for prolonged use.

An estimate of this temperature comes from the heat deflection, or distortion, temperature (HDT) test. A sample in the form of a beam (of standard dimensions) is supported at the ends and loaded at the center by a constant weight. The sample is immersed in an oil bath, and the bath's temperature is raised gradually, resulting in increasing deflections at the beam's center. When the deflection reaches a specified value, the corresponding bath temperature is recorded as the polymer's HDT. For semicrystalline polymers, the maximum allowable temperature will also depend on the polymer's melting range. The HDT can be used as a guide to the temperature limit at which the polymer can be employed, which is based on using 50% of the HDT and room temperature.

A polymer's lower temperature limit is dictated by the temperature at which the polymer becomes brittle, which depends on the glass transition temperature.

Transition Temperatures (Glass Transition and Melt Temperatures)

The most important of the transition temperatures are the glass transition temperature T_g and melting temperature (or, better, melting temperature range) T_m (see Tables 12-11 and 12-12).

Table 12-11 Glass transition (T_g) values for various polymers

	°F	°C
Polyethylene	−184	−120
Polypropylene	−6	−22
Polybutylene	−13	−25
Polybutadiene	−112	−80
Polyvinyl fluoride	−4	−20
Polyvinyl chloride	185	85
Polyvinylidene chloride	−4	−20
Polystyrene	203	95
Polyacetal	−112	−80
6-Nylon	158	70
66-Nylon	122	50
Polyester	230	110
Polycarbonate	302	150
Polytetrafluoroethylene	−175	−115
Silicone	−193	−125

McGraw-Hill DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS

Fourth Edition

on the surface of a metal as a result of thermal fatigue. { 'hēt ,chek }

heat coil [ELEC] Protective device which uses a mechanical element which is allowed to move when the fusible substance that holds it in place is heated above a predetermined temperature by current in the circuit. { 'hēt ,kȯil }

heat conduction [THERMO] The flow of thermal energy through a substance from a higher- to a lower-temperature region. { 'hēt kən,dək·shən }

heat conductivity *See* thermal conductivity. { 'hēt ,kän·dək'tiv·əd·ē }

heat content *See* enthalpy. { 'hēt ¦kän·tent }

heat convection [THERMO] The transfer of thermal energy by actual physical movement from one location to another of a substance in which thermal energy is stored. Also known as thermal convection. { 'hēt kən¦vek·shən }

heat cramps [MED] Painful voluntary-muscle spasm and cramps following strenuous exercise, usually in persons in good physical condition, due to loss of sodium chloride and water from excessive sweating. { 'hēt ,kramps }

heat cycle *See* thermodynamic cycle. { 'hēt ,sī·kəl }

heat death [THERMO] The condition of any isolated system when its entropy reaches a maximum, in which matter is totally disordered and at a uniform temperature, and no energy is available for doing work. { 'hēt ,deth }

heat development [GRAPHICS] A method that employs heat absorption to form the image. { 'hēt di,vel·əp·mənt }

heat dissipation *See* heat loss. { 'hēt ,dis·ə¦pā·shən }

heat distortion point [ENG] The temperature at which a standard test bar (American Society for Testing and Materials test) deflects 0.010 inch (0.254 millimeter) under a load of either 66 or 264 psi (4.55×10^5 or 18.20×10^5 newtons per square meter), as specified. { 'hēt di,stȯr·shən ,pȯint }

heat dump *See* heat sink. { 'hēt ,dəmp }

heat energy *See* internal energy. { 'hēt ,en·ər·jē }

heat engine [MECH ENG] A machine that converts heat into work (mechanical energy). [THERMO] A thermodynamic system which undergoes a cyclic process during which a positive amount of work is done by the system; some heat flows into the system and a smaller amount flows out in each cycle. { 'hēt ,en·jən }

heat equation [THERMO] A parabolic second-order differential equation for the temperature of a substance in a region where no heat source exists: $\partial t/\partial \tau = (k/\rho c)(\partial^2 t/\partial x^2 + \partial^2 t/\partial y^2 + \partial t^2/\partial z^2)$, where x, y, and z are space coordinates, τ is the time, $t(x,y,z,\tau)$ is the temperature, k is the thermal conductivity of the body, ρ is its density, and c is its specific heat; this equation is fundamental to the study of heat flow in bodies. Also known as Fourier heat equation; heat flow equation. { 'hēt i,kwā·zhən }

heat equator [METEOROL] **1.** The line which circumscribes the earth and connects all points of highest mean annual temperature for their longitudes. **2.** The parallel of latitude of 10°N, which has the highest mean temperature of any latitude. Also known as thermal equator. { 'hēt i¦kwād·ər }

heater [ELECTR] An electric heating element for supplying heat to an indirectly heated cathode in an electron tube. Also known as electron-tube heater. [ENG] A contrivance designed to give off heat. { 'hēd·ər }

heater oil *See* heating oil. { 'hēd·ər ,ȯil }

heater-treater [PETRO ENG] A unit for heating an oil-and-water emulsion and then removing the water and gas. { 'hēd·ər ,trēd·ər }

heater-type cathode *See* indirectly heated cathode. { 'hēd·ər ,tīp 'kath,ōd }

heat exchange [CHEM ENG] A unit operation based on heat transfer which functions in the heating and cooling of fluids with or without phase change. { 'hēt iks,chānj }

heat exchanger [ENG] Any device, such as an automobile radiator, that transfers heat from one fluid to another or to the environment. Also known as exchanger. { 'hēt iks,chānj·ər }

heat exhaustion [MED] A heat-exposure syndrome characterized by weakness, vertigo, headache, nausea, and peripheral vascular collapse, usually precipitated by physical exertion in a hot environment. { 'hēt ig,zȯs·chən }

heat filter [OPTICS] Special glass in condenser lens systems to keep heat from film. { 'hēt ,fil·tər }

heat flow [THERMO] Heat thought of as energy flowing from one substance to another; quantitatively, the amount of heat transferred in a unit time. Also known as heat transmission. { 'hēt ,flō }

heat flow equation *See* heat equation. { 'hēt ¦flō i,kwā·zhən }

heat flow province [GEOPHYS] A geographic area in which the heat flow and heat production are linearly related. { 'hēt ¦flō ,präv·əns }

heat flux [THERMO] The amount of heat transferred across a surface of unit area in a unit time. Also known as thermal flux. { 'hēt ,fləks }

heat gain [ENG] The increase of heat within a given space as a result of direct heating by solar radiation and of heat radiated by other sources such as lights, equipment, or people. { 'hēt ,gān }

heath *See* temperate and cold scrub. { hēth }

heather [BOT] *Calluna vulgaris*. An evergreen heath of northern and alpine regions distinguished by racemes of small purple-pink flowers. { 'heth·ər }

heating chamber [ENG] The part of an injection mold in which cold plastic feed is changed into a hot melt. { 'hēd·iŋ ,chām·bər }

heating coils [NAV ARCH] A system of piping in the bottom of an oil tanker which carries steam to heat high-pour-point liquid cargoes to a viscosity suitable for pumping. { 'hēd·iŋ ,kȯilz }

heating degree-day [METEOROL] A form of degree-day used as an indication of fuel consumption; in United States usage, one heating degree-day is given for each degree that the daily mean temperature departs below the base of 65°F (where the Celsius scale is used, the base is usually 19°C). { 'hēd·iŋ di'grē ,dā }

heating element [ELEC] The part of a heating appliance in which electrical energy is transformed into heat. { 'hēd·iŋ ,el·ə·mənt }

heating fuel *See* heating oil. { 'hēd·iŋ ,fyül }

heating load [CIV ENG] The quantity of heat per unit time that must be provided to maintain the temperature in a building at a given level. { 'hēd·iŋ ,lōd }

heating oil [MATER] No. 2 fuel oil; used in domestic heating units. Also known as heater oil; heating fuel. { 'hēd·iŋ ,ȯil }

heating plant [CIV ENG] The whole system for heating an enclosed space. Also known as heating system. { 'hēd·iŋ ,plant }

heating surface [ENG] The surface for the absorption and transfer of heat from one medium to another. { 'hēd·iŋ ,sər·fəs }

heating system *See* heating plant. { 'hēd·iŋ ,sis·təm }

heating value *See* heat of combustion. { 'hēd·iŋ ,val·yü }

heat insulator [MATER] A substance having relatively low heat conductivity. { 'hēt ,ins·ə,lād·ər }

heat island effect [METEOROL] In urban areas with tall buildings, an atmospheric condition in which heat and pollutants create a haze dome that prevents warm air from rising and being cooled at a normal rate, especially in the absence of strong winds. { 'hēt ,ī·lənd i,fekt }

heat lamp [ELEC] An infrared lamp used for brooders in farming, for drying paint or ink, for keeping food warm, and for therapeutic and other applications requiring heat with or without some visible light. { 'hēt ,lamp }

heat lightning [GEOPHYS] Nontechnically, the luminosity observed from ordinary lightning too far away for its thunder to be heard. { 'hēt ,līt·niŋ }

heat loss [PHYS] Energy or power transmitted out of a system in the form of heat. Also known as heat dissipation. { 'hēt ,lȯs }

heat-loss flowmeter [ENG] Any of various instruments that determine gas velocities or mass flows from the cooling effect of the flow on an electrical sensor such as a thermistor or resistor; a second sensor is used to compensate for the temperature of the fluid. Also known as thermal-loss meter. { 'hēt ,lȯs 'flō,mēd·ər }

heat low *See* thermal low. { 'hēt ¦lō }

heat of ablation [THERMO] A measure of the effective heat capacity of an ablating material, numerically the heating rate input divided by the mass loss rate which results from ablation. { 'hēt əv ə'blā·shən }

heat of activation [PHYS CHEM] The increase in enthalpy when a substance is transformed from a less active to a more reactive form at constant pressure. { 'hēt əv ,ak·tə'vā·shən }

heat of adsorption [THERMO] The increase in enthalpy